Patent Vitelline Duct Sinus: An Unusual Presentation

R Khan, R Chana, S Abbas, P Sharma, M Husain

Citation

R Khan, R Chana, S Abbas, P Sharma, M Husain. *Patent Vitelline Duct Sinus: An Unusual Presentation*. The Internet Journal of Surgery. 2006 Volume 13 Number 2.

Abstract

An 8-year-old boy presented with complaints of persistent umbilical discharge of serous material for the past 3 years with excoriation of the periumbilical skin causing severe pain and therefore he applied pressure by the left hand to prevent discharge from coming out. The application of continuous pressure by the hand in flexed position led to the development of a hand deformity in the form of a soft tissue flexion contracture at the interphalangeal joints. The patient was explored through periumblical incision, a tract of approximately 3cm in length was found and excised, bowel and bladder were normal and no diverticulum was found. The hand deformity was managed by active and passive mobilization and corrective splinting. With this conservative therapy, the patient regained almost the natural form and function of his hand over a period of 3 months and was doing well during regular follow-up.

INTRODUCTION

Vitelline duct sinus is associated with a variety of anomalies such as intestinal malrotation, ectopia vesicae, and ectopic intestinal mucosa over umbilical skin. Most reports on symptomatic vitelline duct focus on Meckel's diverticulum, while other anomalies are given little attention. On the other hand, usual causes of development of hand contracture deformities are post burn, Dupuytren's, post traumatic etc. To the best of the authors' knowledge, the development of hand contracture as a complication of patent umbilical vitelline sinus has never been reported before. We are reporting a case of an 8-year-old male presenting with hand contracture as a complication of patent vitelline umbilical sinus.

CASE REPORT

An 8-year-old boy presented with complaints of persistent umbilical discharge of serous material for the past 3 years with excoriation of the periumbilical skin (Fig 1) causing severe pain and therefore he applied pressure by the left hand to prevent discharge from coming out (Fig 2). The application of continuous pressure by the hand in flexed position led to the development of a hand deformity in the form of a soft tissue flexion contracture at the interphalangeal joints (Fig 3). He developed extreme psychological fear of removal of his hand so that when we tried to remove it he showed maximum resistance and if his hand was removed forcefully he automatically put his other hand at its place.

Figure 1

Figure 1

Figure 2

Figure 2

Figure 3

Figure 3

Fistulogram was attempted but failed because even the tube of the smallest calibre could not be inserted through the opening and dye could not be injected.

The patient was explored through periumblical incision, a tract of approximately 3cm in length was found and excised, bowel and bladder were explored and were normal, and no diverticulum was found. After closing the abdomen, the excised tract was sent for histopathological examination and the results showed that it contained intestinal epithelium. The final diagnosis of an umbilical vitelline sinus was made. The patient had developed a contracture of the left hand in the form of a flexion deformity at the proximal and distal interphalyngeal joints with associated hypopigmentation of the skin and hyperpigmentation of the nails. X-ray of the hand was done which showed no bony or joint abnormality. The hand deformity was managed by active and passive mobilization and corrective splinting. With this conservative therapy, the patient regained almost the natural form and function of his hand over a period of 3 months and was doing well during regular follow-up.

DISCUSSION

Delay in the proper treatment of minor surgical conditions can lead to the development of reversible or irreversible complications which can have adverse physical as well as psychological impact. Besides ignorance, poor health care facilities lead to delayed presentations in developing countries like India causing avoidable complications. Scar formation and shortening of soft tissue after prolonged periods of non physiological immobilisation can lead to restriction of joint range of motions. This may be the reason which can explain the development of the unusual hand deformity in this case secondary to the discharging vitelline duct sinus.

CORRESPONDENCE TO

Dr. Rehan N. Khan House No 255, Type III quarters, Ayurvigyan Nagar, Asiad Village Road, New Delhi-110049. Phone Nos: +919911576525 E-mail ID: surgrehan@yahoo.co.in

References

1. Ameh EA, Mshelbwala PM, Dauda MM, Sabiu L, Nmadu PT. Symptomatic Vitelline Duct Anomalies in children. S Afr J Surg. 2005 Aug; 43(3): 4-5.
2. Wong JM. Management of stiff hand: an occupational therapy perspective. Hand Surg. 2002 Dec; 7(2): 261-9.
3. Misharev OS, Zakrevskii GI. Congenital intestinal fistula of the umbilicus in children. Vestn Khir Im II Grek.1981 Jul; 127(7): 89-91.

Author Information

Rehan N. Khan, M.S.
Senior Resident,, Dept. of General Surgery, J.N. Medical College, AMU

R.S. Chana, M.S., M Ch.
Professor, Dept. of General Surgery, J.N. Medical College, AMU

S. Zafar Abbas, M.D.
Senior Resident, Dept. of Radiodiagnosis, J.N. Medical College, AMU

Pramod K. Sharma, M.S.
Junior Resident, Dept. of General Surgery, J.N. Medical College, AMU

Musharraf Husain
Dept. of General Surgery, J.N. Medical College, AMU